



JONATHAN E. FIELDING, M.D., M.P.H.
Director and Health Officer

CYNTHIA A. HARDING, M.P.H.
Chief Deputy Director

313 North Figueroa Street, Room 708
Los Angeles, California 90012
TEL (213) 240-8156 • FAX (213) 481-2739

www.publichealth.lacounty.gov



BOARD OF SUPERVISORS

Gloria Molina
First District

Mark Ridley-Thomas
Second District

Zev Yaroslavsky
Third District

Don Knabe
Fourth District

Michael D. Antonovich
Fifth District

April 1, 2013

TO: Each Supervisor

FROM: Jonathan E. Fielding, M.D., M.P.H. *JE Fielding MD*
Director and Health Officer

SUBJECT: **HOMELESS TUBERCULOSIS OUTBREAK**

This is in response to the Board motion offered by Supervisor Antonovich on February 26, 2013 which requested the Department of Public Health (DPH) to provide a comprehensive status report on the actions planned and being taken to contain the tuberculosis (TB) outbreak among the homeless and to treat those infected.

This report also addresses the motion's instruction to work with the Department of Health Services (DHS) to determine available isolation beds for individuals who may require hospitalization to complete their course of treatment. The motion required DPH to consult with Olive View Medical Center to determine if an expansion of their current TB isolation bed capacity is warranted on a temporary basis within existing funding. Finally, this report addresses the request included in the motion to explore the availability of potential federal funding for any additional costs incurred as a result of DPH's containment and treatment activities.

Background

The TB outbreak among the homeless within the Skid Row area began in 2007. These cases are linked to a specific strain of TB. From 2007 to mid-March 2013, a total of 78 cases have been identified. Of these 78 cases, the majority are male, about 60 are homeless, and approximately 20% are HIV-positive. Among the 60 homeless cases, 11 have died since 2007. This strain of TB is sensitive to and treatable with first-line anti-TB medications. Throughout the course of this outbreak, DPH has worked with stakeholders, community members, and healthcare providers to monitor, treat, and prevent the further spread of this outbreak.

TB Data Summary

Over the last two decades, there has been a significant decline in TB cases in Los Angeles County, from 1,932 cases in 1993 to 625 cases in 2012 (see Figure 1). Among the homeless, there has also been a significant decline in TB cases, from 236 homeless TB cases in 1993, about 12% (of 1,932), to 39 homeless TB cases in 2012, (approximately 6 % of 625).

Figure 1

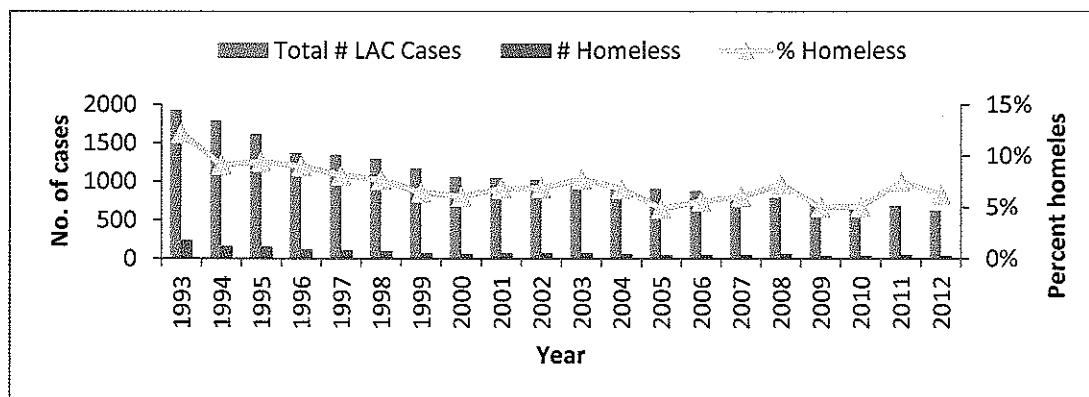


Table 1 below shows the total TB cases reported by year between 2007 and 2012, total TB cases reported to be homeless, and TB cases with this outbreak genotype who also were reported to be homeless. It is important to note that the homeless TB cases reported include cases from throughout Los Angeles County and are not limited to the Skid Row area.

Table 1

Year	Total TB cases	TB cases reported to be homeless*	TB cases with the outbreak strain	TB cases with the outbreak strain reported to be homeless*
2007	815	49	12	10
2008	790	57	15	12
2009	701	35	10	8
2010	675	34	9	7
2011	680	51	13	11
2012	625	39	17	15
Total	4,286	265	76**	63

*Homeless in the year prior to diagnosis of active TB disease

**Not including two cases diagnosed in 2013

TB Among the Homeless

The prevalence of TB among the homeless is not a new phenomenon. While TB is a communicable disease and can affect everyone, some populations are at higher risk of becoming infected, including those living in congregate settings such as homeless shelters. Because of this, DPH has had a long-standing role in addressing TB disease in the homeless, especially in the Skid Row/downtown area.

Over 50 years ago, DPH established a TB clinic to serve the homeless population in this area. This clinic is now housed at the Leavey Center, also known as the Center for Community Health (CCH). This clinic continues to be a top priority for DPH. To better contain the disease, DPH instituted innovative practices such as providing housing and food to homeless TB cases during their treatment. Additionally, DPH provides routine Directly Observed Therapy (DOT) for all homeless TB cases for the duration of their therapy.

Beginning in the 1990's, in order to assist in reducing the large number of TB cases found in Skid Row, the DPH TB Control Program worked with homeless shelter operators within the Skid Row area to establish TB screening for residential programs. These programs are ongoing to today and DPH Community Health Services (CHS) continues to provide TB screening for these programs as well as for residential substance abuse programs throughout the county. Screening, along with other measures (i.e. DOT and incentives and enablers such as housing, food vouchers, and transportation assistance) has dramatically decreased the number of TB cases among the homeless. However, over the years, many shelters have increased their capacity to offer drop-in/overnight housing. In conducting case investigations, DPH learned that many of the current and past homeless TB cases have been identified as frequent users of drop-in/overnight housing. This situation has made it more difficult for DPH to locate and track individuals at risk in this population.

In 2004, new technology for processing specimens from TB cases began to include DNA analysis that could establish potential links between cases. In 2004, the DPH Public Health Laboratory (PHL) began genotyping select TB isolates. In 2007, PHL began universal genotyping of all available TB isolates. In 2009, PHL began to send TB isolates for genotyping to the California Department of Public Health (CDPH) TB genotyping lab. Some of these TB cases with the same genotype already linked by interviews conducted by DPH Public Health Nurses, but locations and dates of exposure and infection of contacts were not generally known due to the transient nature of the homeless population and the congregate housing within shelters.

Identification and Containment of the Outbreak

During the outbreak, DPH has conducted a multi-pronged public health response to prevent additional cases of TB. Investigations were done to identify and evaluate individuals (contacts) who have been exposed to TB cases in this outbreak. Several of these investigations led DPH to a shelter near Skid Row that provided homeless individuals nightly transportation by bus from Skid Row to the shelter. DPH CHS and TB Control Program staff carried out screening at this shelter of approximately 200 contacts who had spent at least one night in the shelter at the same time as a case of infectious active TB disease during 2012. In conducting this screening, DPH received full cooperation of both the shelter operators and their funder, Los Angeles Homeless Services Authority (LAHSA).

After the contact investigation of the cases in a shelter in SPA 6 were completed in late 2012, DPH launched a significant effort to address possible exposure risks among the homeless population, including working with shelter operators and local community clinics that provide medical care to the homeless population. On December 17, 2012, DPH sent a memo notifying your Board about this effort. Additionally, on February 22, 2013, DPH sent a memo updating your Board on the outbreak, including information about investigative activities and activities with key partners.

Efforts with Federal and State Partners

Over the years, DPH has worked closely with both the CDPH TB Control Branch and the Centers for Disease Control and Prevention (CDC) on TB cases in the homeless. In this particular outbreak, in order to fully ensure that all cases of active TB disease are identified and all appropriate measures to identify all possible exposed contacts are implemented, DPH requested assistance from the CDC Division of TB Elimination. In response to this request, the CDC deployed a team to Los Angeles County from March 4, 2013 to March 22, 2013.

The CDC team provided recommendations regarding prioritized activities to address this continuing outbreak:

1. Identify and treat patients with clinically active disease;
2. Identify and provide preventive treatment for contacts with latent TB infection (in a prioritized manner, based upon duration and intensity of exposure, infectious of cases, and risk of developing active TB disease); and
3. Develop partnerships with shelter operators and medical providers to implement long term prevention strategies for control of TB among homeless persons.

Ongoing Efforts

To achieve this end and to minimize further transmission, DPH is engaged in the following efforts:

- *Analysis of current data sources to identify possible contacts to known cases*

This activity includes reviewing related databases from agencies that serve homeless clients, including social service, public safety, and the general medical provider community (e.g., LAHSA, Union rescue Mission, Midnight Mission, Los Angeles Mission, Sheriff's Department, and medical providers in the Skid Row area). The CDC and the CDPH are assisting DPH with this analysis to ensure that all potentially exposed individuals (also known as "contacts") are identified and all appropriate efforts are initiated to locate and bring them to medical attention for TB screenings.

- *Onsite evaluations at high-risk sites to look for additional cases of active TB disease*

After partnering with CDPH and CDC to identify high-risk sites, DPH will perform targeted onsite evaluations to identify individuals with active TB disease who have not yet sought medical care. In addition, DPH will work closely with DHS facilities to ensure adequate capacity to evaluate patients referred for further diagnostic evaluation for active TB disease.

- *Targeted testing and treatment for high-risk contacts*

This activity includes partnering with shelters and medical providers to locate individuals who might have been exposed, and ensure that those individuals receive appropriate medical evaluations. Among people found to have latent TB infection, incentives, and alternative short-course regimens can be utilized to enhance uptake of and adherence to treatment.

- *Community education*

Throughout this outbreak, DPH has routinely kept relevant community stakeholders informed through in-person meetings and electronic communications. DPH staff has worked with all major shelter operators including Union Rescue Mission, LA Mission, Midnight Mission and LAHSA-funded shelters to provide guidelines and training on TB screening and infection control measures to reduce and stop the spread of TB, including establishing a cough alert protocol and referral of

any suspect cases for immediate clinical evaluation. Additionally, DPH issued a provider alert to all medical providers, emergency departments, clinics, and hospitals. The alert included information on symptoms, appropriate tests, and reporting procedures for TB.

To keep community members informed, DPH has participated and will continue to participate in community meetings and outreach events. DPH developed fact sheets in English and Spanish on the outbreak and posted them on the DPH website, <http://publichealth.lacounty.gov>. DPH has trained the County 2-1-1 Information Line operators to handle calls and answer questions from the public about the outbreak. Flyers directing residents to 2-1-1 have also been developed and posted on the DPH website.

In addition, DPH met with key stakeholders to provide updates on the TB outbreak and seek their cooperation in controlling the spread of TB in this population. These stakeholders include Homeless Healthcare LA, Los Angeles Community Action Network, Downtown Neighborhood Council, Skid Row Community Advisory Board, Central City East Association, Shelter Partnership Inc., SRO Housing Corporation, LA City and other County departments such as the Department of Mental Health, the Department of Children and Family Services, and the Department of Public and Social Services.

- *Annual TB screening for the homeless entering shelters in Los Angeles County*

DPH is working with local clinics and shelter operators to determine the best approach to facilitate TB clearance for the homeless upon entry into the shelter. To date, DPH has met with the three major healthcare providers in Skid Row--JWCH, LA Christian Medical Clinics, and the University of California, Los Angeles (at the Union Rescue Mission)--to ensure that they have appropriate TB screening and evaluation protocols as well as to request that they include their screening results into a shelter clearance registry to be made available to shelter operators upon client entry into the shelter.

- *Integrated outreach strategies in the homeless population for provision of TB screening and flu vaccination*

Starting in 2013, DPH is planning a change in the annual Fall Flu Outreach that will move community flu outreach into August and September, as the flu vaccine becomes available. In tandem with the outreach to the community at-large, DPH will conduct flu vaccine outreach among the homeless in Skid Row shelters and in the cold weather shelters. TB screening will also be offered as part of the flu outreach for the homeless. The data from this outreach will assist shelter clinics and operators in obtaining routine screening for their clients.

DPH is partnering with City of Los Angeles Housing Department's Housing Opportunities for Persons with AIDS (HOPWA) program to ensure care for people living with HIV who have a latent TB infection (LTBI). These patients are at highest risk for active TB disease and it is imperative that they receive assistance in completing their treatment for both TB infection and HIV. In order to ensure that this happens, HOPWA has agreed to provide housing and DPH will administer daily therapy and assist with HIV medication administration for these individuals.

Collaboration with the Department of Health Services

In August 2011, the DHS Olive View-UCLA Medical Center opened an inpatient unit dedicated to treatment of patients with TB. This unit is currently budgeted at 10 beds. At this point, this capacity appears to be sufficient to meet the current need for inpatient beds associated with this outbreak. DPH will continue to work with DHS to monitor the situation and will inform your Board if additional beds are needed.

Local, State and Federal Funding

In responding to this outbreak, DPH has drawn and continues to draw from both federal and State grant resources as well as from local resources. From the CDC, DPH receives funding from the Cooperative Agreement grant. From the CDPH, DPH receives funding from the TB Subvention Base Award. DPH has used both the CDC and the State grant revenue streams to procure portable radiology services (chest X-ray images), TB blood testing supplies, and patient incentives (i.e. food cards).

For fiscal year (FY) 2013-14, DPH has been notified that additional CDC Cooperative Agreement grant funding may be available due to unexpended balances from the last calendar year. Also for FY 2013-14, DPH has requested an additional amount from the TB Subvention Base Award grant to support ongoing outbreak response activities.

In addition to the TB Subvention Base Award, the State also administers the Trust Account Fund S9X. In order for DPH to receive money from the Trust Account Fund S9X, DPH must submit a budget request to the CDPH. Allowable expenditures include reimbursement of overtime costs associated with TB screening at homeless service provider venues, portable radiology services, TB blood testing supplies or services, patient incentives, and other equipment or supplies needed to support the outbreak response. These funds are available upon State approval of the budget request submitted by DPH. The balance of this trust fund will remain available until expended.

For items not covered by federal or State resources, DPH draws from net County cost (NCC). Items covered by NCC include: LTBI and TB disease treatment medications, additional TB screening incentives and supplies, regular employee salary costs related to the outbreak, and routine radiology costs.

If you have any questions or would like additional information, please let me know.

JEF:dd/rkf
PH:1303:001

c: Chief Executive Officer
County Counsel
Executive Officer, Board of Supervisor